

Rocky Flats Fourth Five-Year Review Report Overview

Vera Moritz, U.S. EPA

Rocky Flats Stewardship Council Meeting

September 11, 2017



EPA guidance

❖ Comprehensive Five Year Review Guidance

- Office of Emergency and Remedial Response

❖ <https://semspub.epa.gov/work/HQ/128607.pdf>



Roles and responsibilities

- ❖ CERCLA §120 and EO 12580 provide the basis for EPA's oversight role at other Federal agency NPL sites.
- ❖ EO 12580 paragraphs 2(d) and (g) delegate remedial responsibilities to the Department of Defense (DOD) and the Department of Energy (DOE).
- ❖ Five-year reviews are conducted by the Federal agency but EPA retains final authority over whether the five-year reviews adequately address the protectiveness of remedies.
- ❖ EPA will either concur with the final Federal agency protectiveness determination, or EPA may provide independent findings.



Contents of the 5-Year Review

1.0 Introduction

2.0 Background

❖ 3.0 Remedial Actions

❖ 4.0 Progress Since the Last Five-Year Review

❖ 5.0 Five-Year Review Process

❖ 6.0 Technical Assessment

- 6.1 Question A: Is the Remedy Functioning as Intended by the Decision Documents
- 6.2 Question B: Are the Exposure Assumptions, Toxicity Data, Cleanup Levels, and RAOs Used at the Time of the Remedy Still Valid?
- 6.3 Question C: Has Any Other Information Come to Light That Could Call into Question the Protectiveness of the Remedy?

❖ 7.0 Issues, Recommendations, and Follow-Up Actions



Question A: Is the remedy functioning as intended by the decision documents?

- ❖ Institutional controls are in place and effective in meeting the objectives presented in Table 2. Physical controls are in place and effective at preventing human health exposures from contaminated groundwater, surface water, and soil.
- ❖ Required groundwater and surface water monitoring is ongoing and supports achievement of RAOs in the long term.
- ❖ Operation and maintenance (O&M) of remedy components at the OLF, PLF, and groundwater treatment systems is ongoing and supports achievement of RAOs in the long term.



Question B: Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of the remedy still valid?

- ❖ The exposure assumptions, toxicity levels, cleanup levels, and RAOs used at the time of the remedy are still valid.
- ❖ There were no changes in exposure pathways or assumptions.
- ❖ Revisions/changes to surface water quality standards and toxicity levels were assessed and determined to not impact the remedy.



Question C: Has Any Other Information Come to Light That Could Call into Question the Protectiveness of the Remedy?

- ❖ The remedy remained protective despite high precipitation events and extreme weather variability



OU3 and POU determinations of UU/UE

- ❖ The 2006 CAD/ROD determined that conditions in the POU are acceptable for unrestricted use and unlimited exposure.
- ❖ In May 2007, the POU was deleted from the NPL and the lands comprising the POU were transferred to the U.S. Fish and Wildlife Service for establishment as the Rocky Flats National Wildlife Refuge.
- ❖ Operable Unit 3 consists of lands outside the site boundary that were addressed under a separate CAD/ROD June 1997, and the OU was deleted from the NPL in May 2007.
- ❖ A review of changes to toxicity factors conducted for this FYR confirmed that conditions in OU3 and the POU remain suitable for unlimited use and unrestricted exposure.



Protectiveness Statement

The remedy at the COU is protective of human health and the environment.

- Interim removal actions completed prior to the CAD/ROD included the removal of contaminated soils and sediments, decontamination and removal of equipment and buildings, construction of cover systems at the two landfills, and construction and operation of four groundwater treatment systems.
- A monitoring and maintenance plan is in place to ensure the long-term integrity of the remedy.
- Routine inspections of remedy components ensure that maintenance and repairs are identified and implemented.



Protectiveness Statement (cont.)

- Groundwater treatment systems continue to reduce contaminant load to surface water.
- Surface water and groundwater monitoring provide assurance that water quality at the COU boundary is protective.
- Institutional controls are effective in preventing unacceptable exposures to residual contamination by prohibiting building construction, controlling intrusive activities, restricting the use of groundwater and surface water, and protecting engineered remedy components.
- Physical controls are effective at controlling access to the COU.



Contents of the 5-Year Review Appendices

- ❖ Appendix A - Site Chronology
- ❖ Appendix B - Rocky Flats Legacy Management Agreement Att. 2
- ❖ Appendix C - Risk Assessment Review for COU, POU, and OU3
- ❖ Appendix D - RFLMA Contact Records
- ❖ Appendix E - Groundwater and Surface Water Monitoring
- ❖ Appendix F - Documents Reviewed
- ❖ Appendix G - Site Inspection Checklist
- ❖ Appendix H - Changes to Applicable, Relevant, and Appropriate Requirements
- ❖ Appendix I - Responses to Stakeholder Input on the FYR

